

Figure 1A

C atg GGT cac ggc tcc aac aaA ctG ccG ggC ttt gcT acc cgC
gcT atC cac caC ggT taT gac ccG cag gaT cac ggT ggT gca ctg
gtT ccG ccg gtT tac cag acT gcT acT ttc acc ttc ccG acc gtT
gaa tac ggc gct gcg tgc ttt gcT ggc gaA cag gcT ggT caC ttc
tac TCC cgT atc tcc aac ccG acc ctG aac ctg ctg gaa gca cgT
atg gcA tcT ctg gaa ggc ggc gaA gcT ggT ctg gcg ctg gcA tcT
ggT atg ggC gcg atc acC tcT acC ctG tgg acC ctg ctg cgT ccG
ggT gac gaA gtT ctg ctg ggc aac acc ctg taT ggT tgT acT ttt
gcT ttc ctg cac cac ggT atc ggT gaA ttc ggC gtT aaA ctg cgT
caC gtA gaT atg gct gac ctg cag gca ctg gaA gcg gcT atg acC
ccg gcT acc cgT gtT atc taC ttc gaA tcC ccg gcT aac ccG aac
atg cac atg gcT gaC atc gcA ggT gtT gcT aaA atC gcT cgT aag
cac ggc gcT acc gtA gtT gtT gaT aac acc tac tgT acT ccg tac
ctg caA cgT ccG ctg gaA ctg ggc gcT gac ctg gtT gtT caC tcC
gcT acT aaA tac ctg TCC ggc caC ggc gac atc act gct ggc atC
gtA gtA ggc TCC cag gca ctg gtT gac cgt atC cgt ctg caA ggT
ctG aaA gac atg acc ggc gcT gtT ctG tcC ccG caC gac gcA gca
ctg Ctg atg cgT ggT atc aag acc ctG aac ctg cgT atg gac cgT
cac tgT gcT aac gct cag gtA ctg gcT gaA ttc ctG gcT cgT cag
ccg cag gtA gaA ctg atc caC taT ccg ggc ctg gcT TCC ttc ccg
cag tac acT ctg gcA cgT cag cag atg TCC cag ccg ggc ggT atg
atc gcT ttc gaa ctG aag ggT ggc atc ggC gcT ggT cgT cgT ttc
atg aac gcT ctg caG ctg ttc TCC cgT gcg gtT TCC ctg ggT gaC
gcT gaA tcC ctg gcg cag cac ccg gca TCC atg act caC tcc TCC
taC acT ccG gaA gaA cgt gcg caC tac ggc atc tcc gaA ggC ctg
gtT cgT Ctg tcT gtT ggT ctg gaa gac atc gaT gaT ctg ctg gcA
gaC gtT caG cag gcT ctG aag gcT agC gcT tga GGA TCC

Figure 1B

C atg GGT cac ggc tcc aac aaA ctG ccG ggC ttt gcT acc cgC
gcT atC cac caC ggT taT gac ccG cag gaT cac ggT ggT gca ctg
gtT ccG ccg gtT tac cag acT gcT acT ttc acc ttc ccG acc gtT
gaa tac ggc gct gcg tgc ttt gcT ggc gaA cag gcT ggT caC ttc
tac TCC cgT atc tcc aac ccG acc ctG aac ctg ctg gaa gca cgT
atg gcA tcT ctg gaa ggc ggc gaA gcT ggT ctg gcg ctg gcA tcT
ggT atg ggC gcg atc acC tcT acC ctG tgg acC ctg ctg cgT ccG
ggT gac gaA gtT ctg ctg ggc aac acc ctg taT ggT tgT acT ttt
gcT ttc ctg cac cac ggT atc ggT gaA ttc ggC gtT aaA ctg cgT
caC gtA gaT atg gct gac ctg cag

Figure 1C

ctg caq gca ctg gaA gcg gcT atg acC ccg gcT acc cgT gtT atc
 taC ttc gaA tcC ccg gcT aac ccG aac atg cac atg gcT gaC atc
 gcA ggT gtT gcT aaA atC gcT cgT aag cac ggc gcT acc gtA gtT
 gtT gaT aac acc tac tgT acT ccg tac ctg caA cgT ccG ctg gaA
 ctg ggc gcT gac ctg gtT gtT caC tcC gcT acT aaA tac ctg TCC
 ggc caC ggc gac atc act gct ggc atC gtA gtA ggc TCC cag gca
 ctg gtT gac cgt atC cgt ctg caA ggT ctG aaA gac atg acc ggc
 gcT gtT ctG tcC ccG caC gac gcA gca ctg Ctg atg cgT ggT atc
 aag acc ctG aac ctg cgT atg gac cgT cac tgT gcT aac gct cag
 gtA ctg gcT gaA ttc

Figure 1D

gaA ttc ctG gcT cgT cag ccg cag gtA gaA ctg atc caC taT ccg
 ggc ctg gcT TCC ttc ccg cag tac acT ctg gcA cgT cag cag atg
 TCC cag ccg ggc ggT atg atc gcT ttc gaa ctG aag ggT ggc atc
 ggC gcT ggT cgT cgT ttc atg aac gcT ctg caG ctg ttc TCC cgT
 gcg gtT TCC ctg ggT gaC gcT gaA tcC ctg gcg cag cac ccg gca
 TCC atg act caC tcc TCC taC acT ccG gaA gaA cgt gcg caC tac
 ggc atc tcc gaA ggC ctg gtT cgT Ctg tcT gtT ggT ctg gaa gac
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 gcT tga GGA TCC

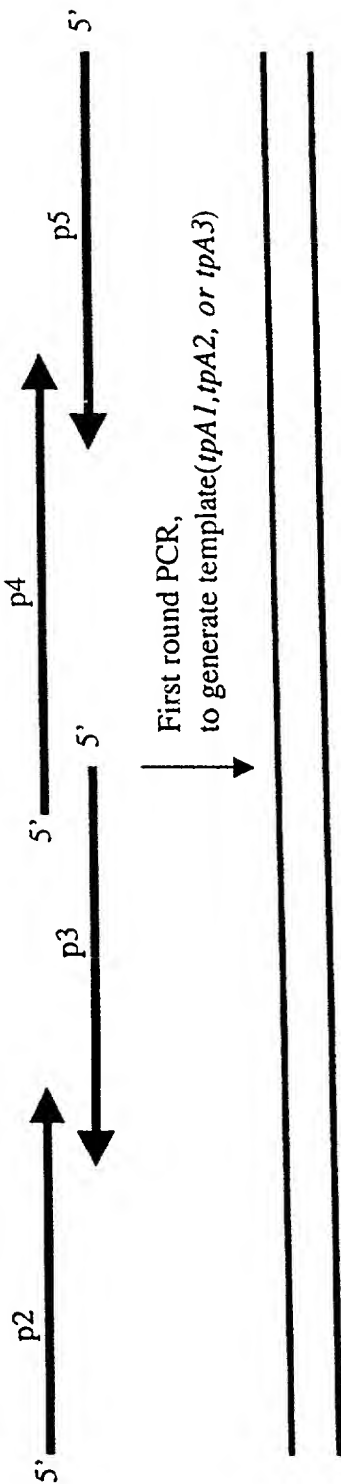


Figure 2A

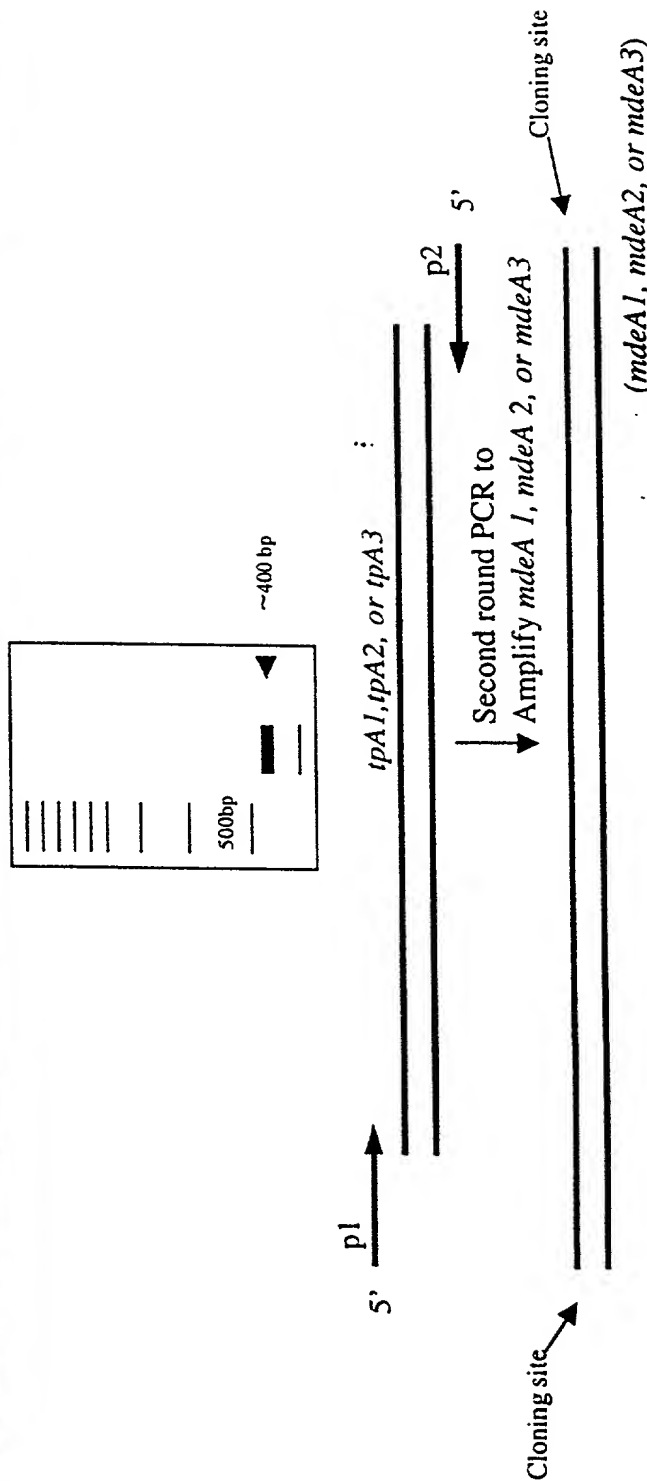
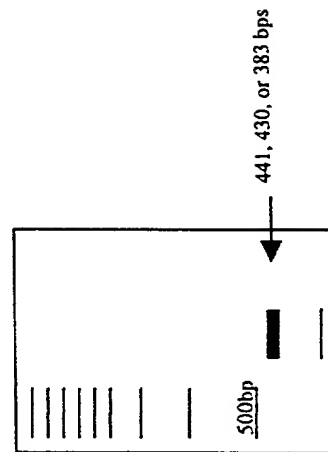


Figure 2B

- P1= mdePr1-1, mdePr2-1, or mdePr1-3
- P2= mdePr1-2, mdePr2-2, or mdePr3-2
- P3= mdePr1-3, mdePr2-3, or mdePr3-3
- P4= mdePr1-4, mdePr2-4, or mdePr3-4
- P5= mdePr1-5, mdePr2-5, or mdePr3-5
- P6= mdePr1-6, mdePr2-6, or mdePr3-6



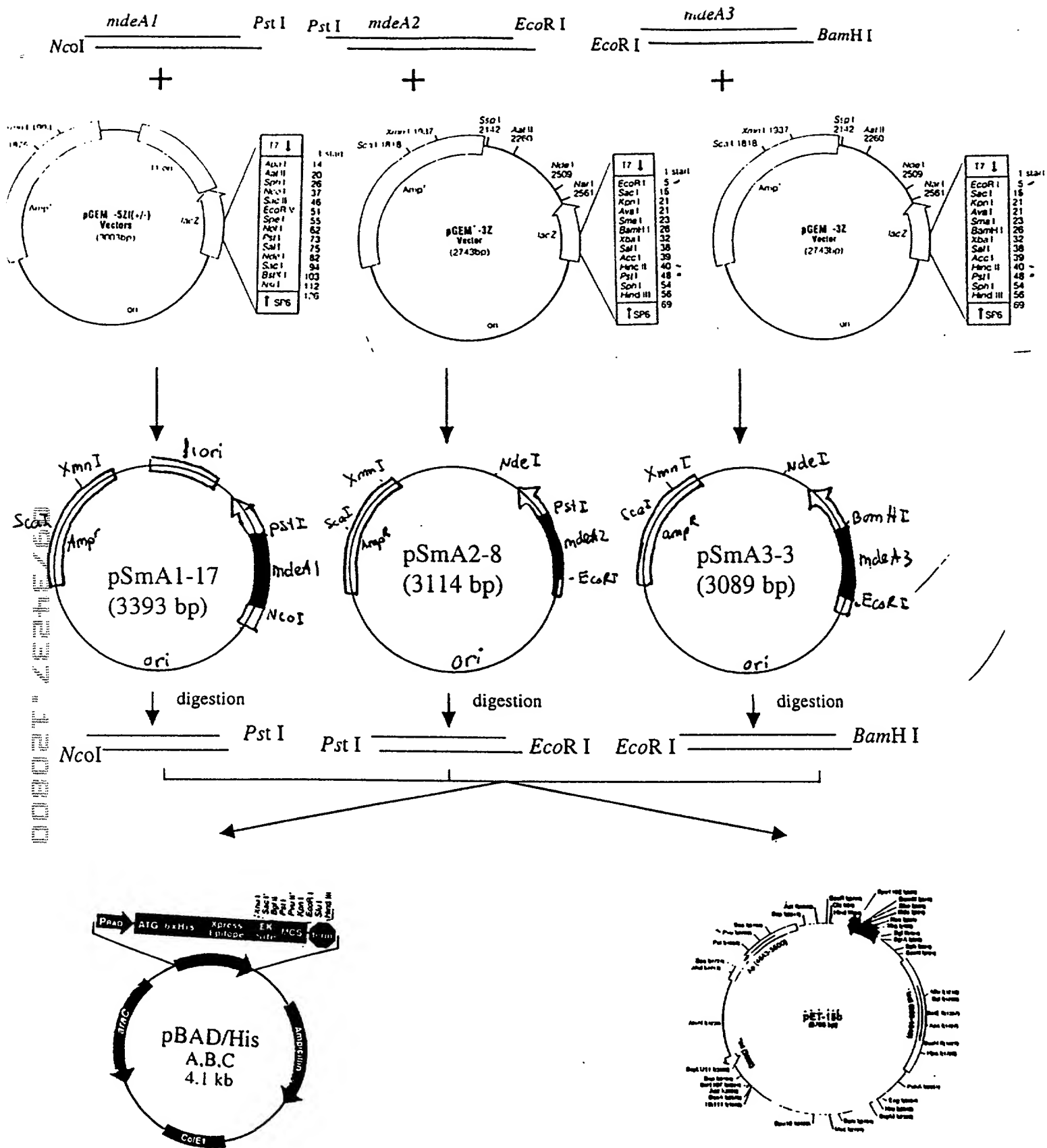


FIGURE 3

Figure 4A: THE INDUCTION OF THE SYNTHETIC *P. putida*
METHIONINE -GAMMA-LYASE BL21/pTM

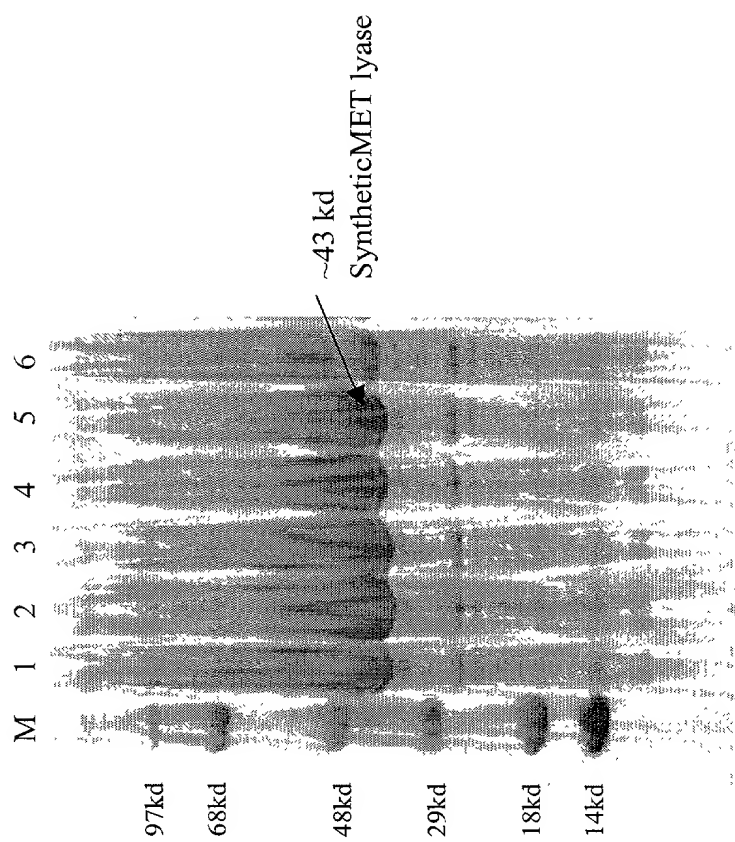


Figure 4B: The induction of native *P. putida* Methionine lyase (pSIT-mdeA)

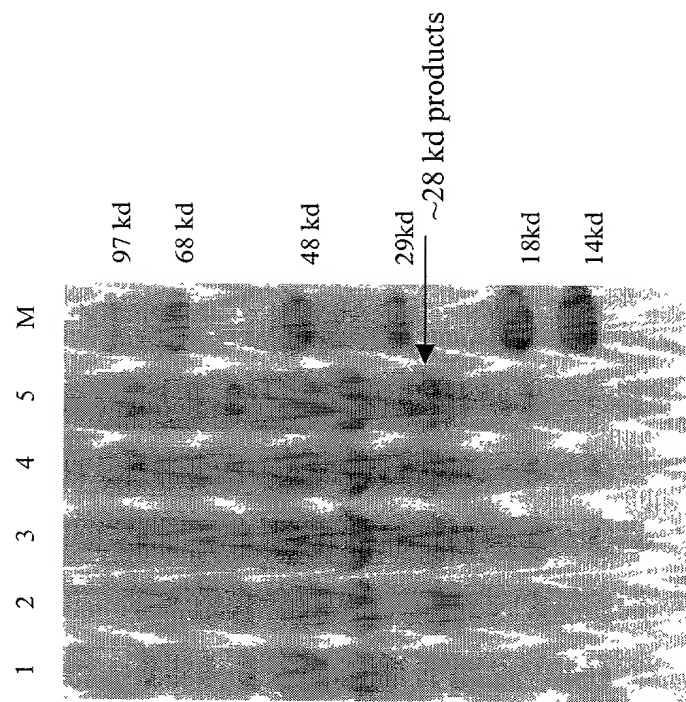
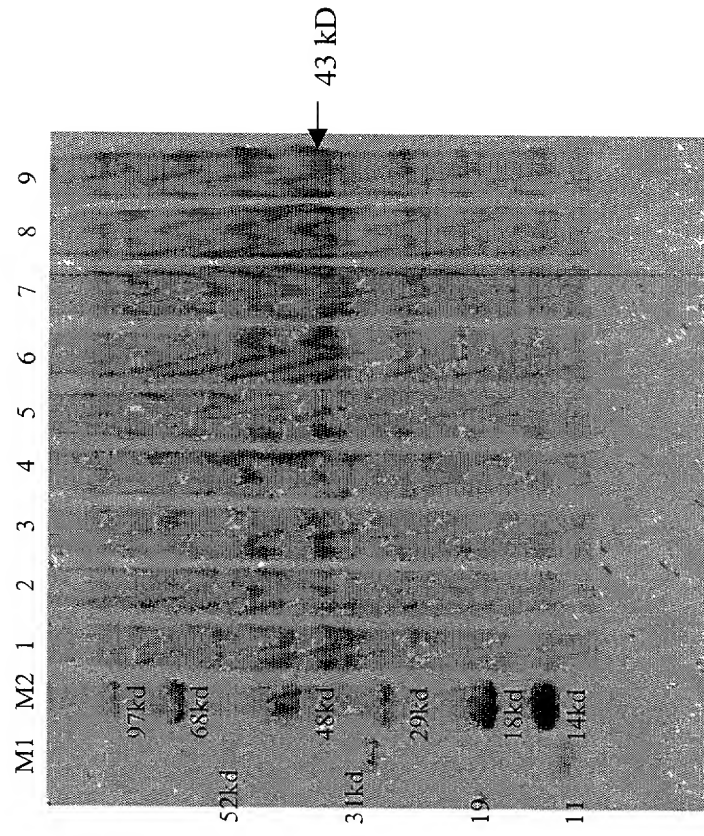


Figure 5: The Induction of the *P. putida* Naphthalene Dioxygenase and the *T. vaginalis* methionine -gamma- lyase (*mgl I*)



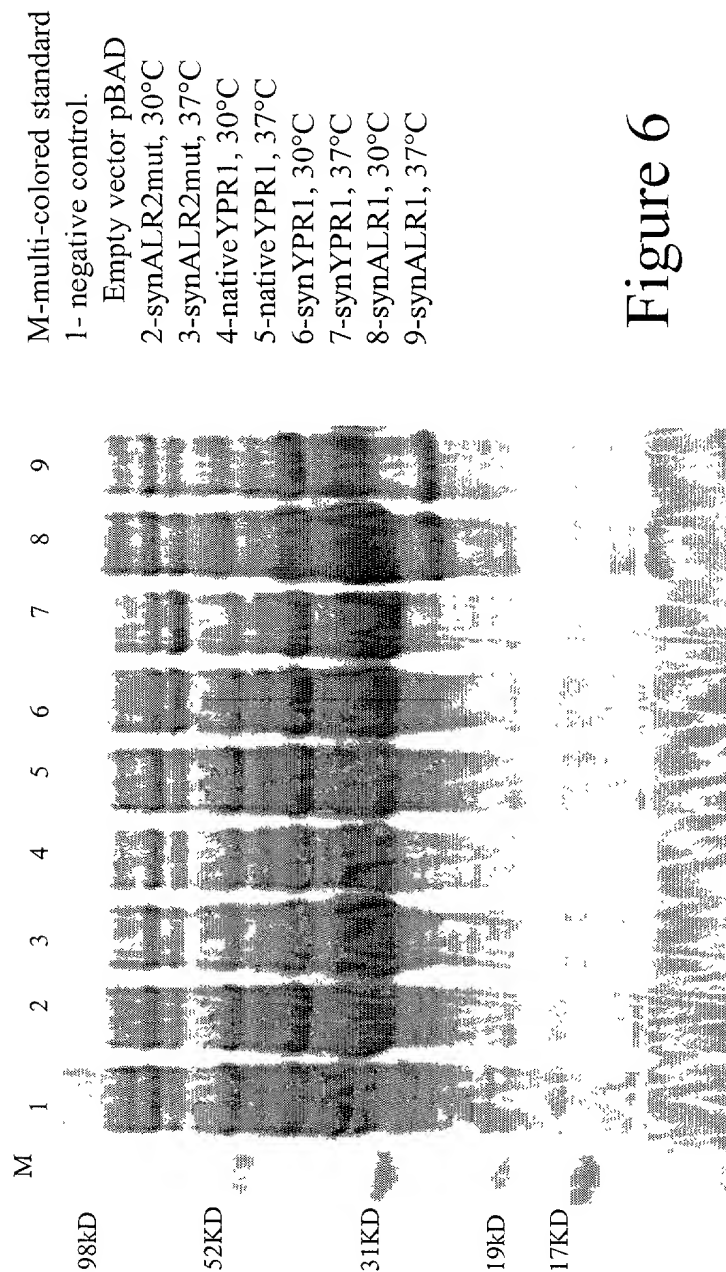


Figure 6

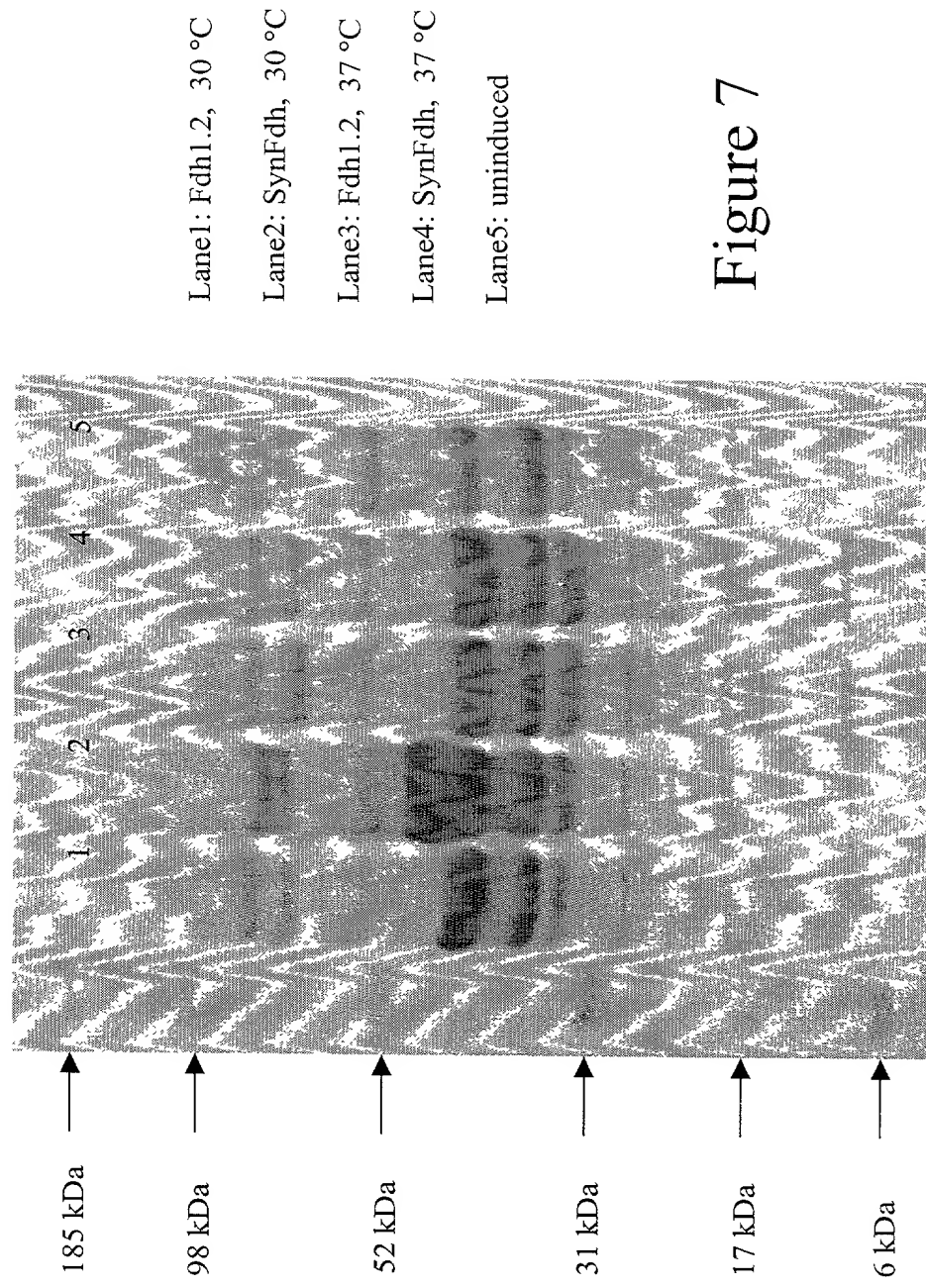
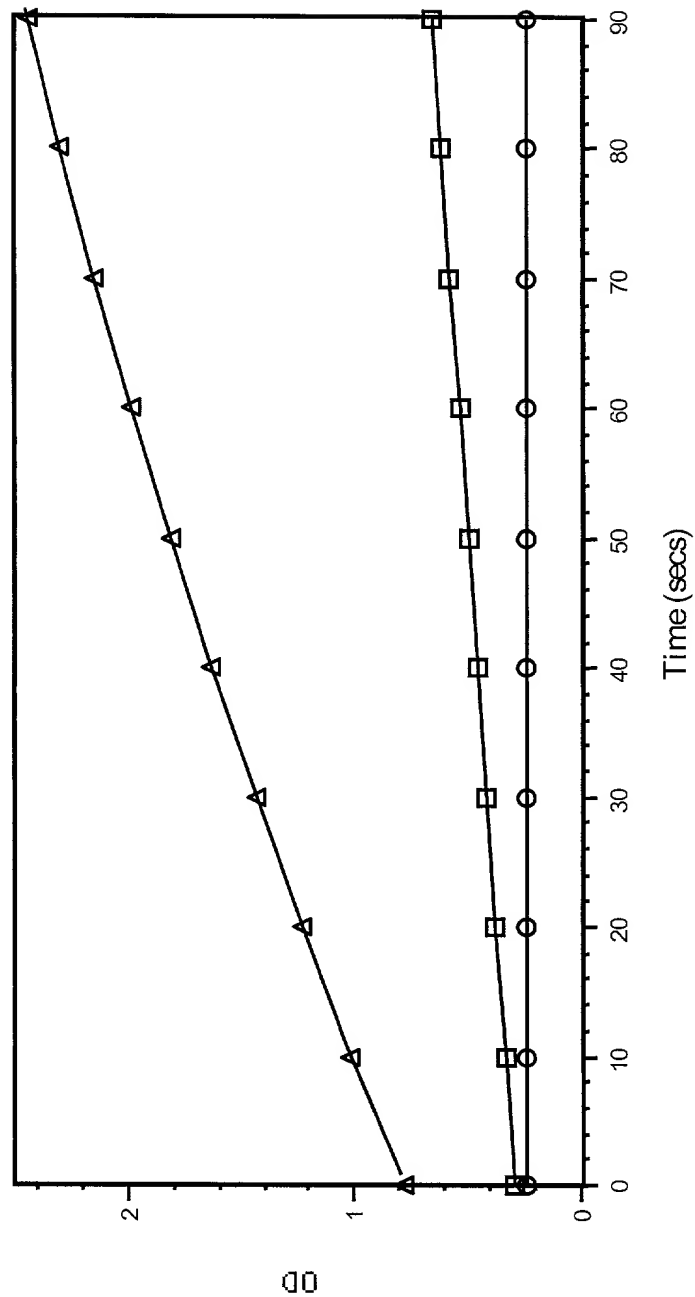


Figure 7



○ Uninduced Fdh1.2

□ Fdh1.2 induced with 0.2% L-arabinose at 30 °C

△ SynFdh induced with 0.2% L-arabinose at 30 °C

Figure 8